

NOVEMBER/DECEMBER 2024

CBC41/FBC41 — PLANT BIOCHEMISTRY



Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Write the difference between light and dark reactions.
2. Abbreviate RUBISCO.
3. Define phytochemicals and give examples.
4. Draw the structure of ethylene.
5. Give examples of nitrogen fixing bacteria.
6. Discuss about rhizobium.
7. What is the function of protease inhibitor?
8. Name the highly expressing protein in red kidney beans.
9. Name any two vitamins that possess antioxidant property.
10. What triggers oxidative stress?



SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) What is the structure and function of chlorophyll?

Or

- (b) Bring out the significance of photosynthesis.

12. (a) Write short notes on flavanoids.

Or

- (b) Discuss about Auxin.

13. (a) Explain about symbiotic nitrogen fixation

Or

- (b) Write about the importance of nitrogen cycle.

14. (a) Give an account of heavy metal stress in plants.

Or

- (b) Discuss about nitriles as plant toxins.

15. (a) What is ROS generation? Add notes on its scavenging activity.

Or

- (b) Elaborate on catalase.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the mechanism of C2 cycle.

17. Detailed notes on

(a) cytokinin

(b) abscisic acid

18. Brief notes on nitrate assimilation and its regulation.

19. Essay on stress in plants.

20. Write about enzymatic and non-enzymatic antioxidant system.